WHAT IS CLAIMED IS:

1. An edge communication device in a communication system establishing a virtual private network for communication between a plurality of customer networks by forming a tunnel on a provider network, said edge communication device being connected at input and output ends of said tunnel,

said edge communication device comprising terminating means for terminating a routing protocol used in said customer network.

2. An edge communication device as set forth in claim 1, which further comprises a table composed of VNP establishment information relating to said virtual private network and correspondence information of ports connected to said provider network and preliminarily assigned capsule addresses and IP addresses of each communication device on said customer network side,

said terminating means includes retrieving means for retrieving said table from a destination address of a packet input from said customer network and encapsulating means for encapsulating said packet on the basis of retrieved capsule address for feeding to said provider network.

3. An edge communication device as set forth in claim 2, wherein said encapsulating means encapsulates a control packet

on the basis of said capsule address for other customer network belonging on the same virtual private network.

4. An edge communication device as set forth in claim 2, wherein said terminating means includes means for receiving and decoding said control packet generated in said customer network and means for updating data of said table according to the result of decoding.

5. An edge communication device as set forth in claim 2, wherein said terminating means includes means for removing capsule containing said capsule address for the packet arriving from said provider network to own device, and determining destination referring to said table on the basis of a destination IP address contained in said packet for feeding.

6. An edge communication device as set forth in claim 2, wherein said terminating means includes means for erasing information relating to faulty interface in response to failure of a working interface for said customer network and for notifying failure to other relevant edge communication devices and use of a reserved interface.

7. An edge communication device as set forth in claim 6, wherein said terminating means includes means for erasing

information in said table relating to said faulty interface in response to failure notice from other edge communication device and adding information relating to said reserved interface in said table in response to a notice of use of said reserved interface.

8. An edge communication device as set forth in claim 1, wherein the routing protocol used in said customer network is an open shortest path first protocol.

9. A communication control method in a communication system establishing a virtual private network for communication between a plurality of customer networks by forming a tunnel between edge communication devices on a provider network , said communication control method comprising:

terminating step of terminating a routing protocol used in said customer network.

10. A communication control method as set forth in claim 9, wherein said edge communication device comprises a table composed of VNP establishment information relating to said virtual private network and correspondence information of ports connected to said provider network and preliminarily assigned capsule addresses and IP addresses of each communication device on said customer network side,

said terminating step includes retrieving step of retrieving said table from a destination address of a packet input from said customer network and encapsulating step of encapsulating said packet on the basis of retrieved capsule address for feeding to said provider network.

11. A communication control method as set forth in claim 10, wherein said encapsulating step encapsulates a control packet on the basis of said capsule address for other customer network belonging on the same virtual private network.

12. A communication control method as set forth in claim 10, wherein said terminating step includes step of removing capsule containing said capsule address for the packet arriving from said provider network to own device, and determining destination referring to said table on the basis of a destination IP address contained in said packet for feeding.

13. A communication control method as set forth in claim 10, wherein said terminating step includes step of receiving and decoding said control packet generated in said customer network in response to adding IP address or modifying topology in said customer network, and updating data of said table accoding to the result of decoding.

14. A communication control method as set forth in claim 10, wherein said terminating step includes step of erasing information relating to faulty interface in response to failure of a working interface for customer network and step of notifying failure to other relevant edge communication devices and use of a reserved interface.

15. A communication control method as set forth in claim 14, wherein said terminating step includes step of erasing information in said table relating to said faulty interface in response to failure notice from other edge communication device, and adding information relating to said reserved interface in said table in response to a notice of use of said reserved interface.

16. A communication control method as set forth in claim 9, wherein the routing protocol used in said customer network is an open shortest path first protocol.

17. A communication control method as set forth in claim 13, wherein a concentrated processing unit for concentrically managing said table is provided and

said communication control method comprises:

step of uploading an updated table to said concentrated

processing unit after updating data of said table according to a result of decoding of said control packet and step of downloading the table uploaded from said concentrated processing unit to the relevant edge communication device.

18. A storage medium storing a communication control method in a communication system establishing a virtual private network for communication between a plurality of customer networks by forming a tunnel between edge communication devices on a provider network , said program comprising:

terminating step of terminating a routing protocol used in said customer network.

19. A storage medium as set forth in claim 18, wherein said edge communication device comprises a table composed of VNP establishment information relating to said virtual private network and correspondence information of ports connected to said provider network and preliminarily assigned capsule addresses and IP addresses of each communication device on said customer network side,

said terminating step includes retrieving step of retrieving said table from a destination address of a packet input from said customer network and encapsulating step of encapsulating said packet on the basis of retrieved capsule address for feeding to said provider network.

20. A storage medium as set forth in claim 19, wherein said encapsulating step encapsulates a control packet on the basis of said capsule address for other customer network belonging on the same virtual private network.

21. A storage medium as set forth in claim 19, wherein said terminating step includes step of removing capsule contining said capsule address for the packet arriving from said provider network to own device, and determining destination referring said table on the basis of a destination IP address contained in said packet for feeding.

22. A storage medium as set forth in claim 19, wherein said terminating step includes step of receiving and decoding said control packet generated in said customer network in response to adding IP address or modifying topology in said customer network, and updating data of said table according to the result of decoding.

23. A storage medium as set forth in claim 19, wherein said terminating step oncludes step of erasing information relating to faulty interface in response to failure of a working interface for customer network, and step of notifying failure to other relevant edge communication devices and use of a reserved

interface.

24. A storage medium as set forth in claim 23, wherein said terminating step includes step of erasing information in said table relating to said faulty interface in response to failure notice from other edge communication device and adding information relating to said reserved interface in said table in response to a notice of use of said reserved interface.

25. A storage medium as set forth in claim 18, wherein the routing protocol used in said customer network is an open shortest path first protocol.